

INFORMATION HANDOUT

For Contract No. 12-0H2254

At Route 73

Identified by

Project ID 1212000057

MATERIALS INFORMATION

Aerially Deposit Lead



Geocon Project No. S9890-06-01
September 30, 2014

VIA EMAIL

Mr. David Yaghoubi
Caltrans – District 12
Office of Environmental Engineering & Corridor Studies
3347 Michaelson Drive, Suite 100
Irvine, CA 92612

Subject: AERIALY DEPOSITED LEAD INVESTIGATION RESULTS
 NORTHBOUND ROUTE 73, POST MILE 26.1 TO 28.0
 COSTA MESA, CALIFORNIA
 CONTRACT 12A1535; EA 0H2250; TO 12-0H2250-01

Dear Mr. Yaghoubi:

In accordance with the California Department of Transportation's (Caltrans) Contract No. 12A1535 and Task Order No. 12-0H2250-01, dated August 1, 2014, we performed sampling and analytical testing to evaluate the potential presence of aerially deposited lead in soil within the northbound shoulder of Route 73 between Post Miles (PM) 26.1 and 28.0 (the Site) in the City of Costa Mesa, California. This report summarizes the purpose of the project and the scope of services requested by Caltrans, and outlines procedures and methods employed by Geocon to complete the project. The location of the Site is depicted on Figure 1.

PURPOSE AND SCOPE OF SERVICES

Caltrans intends to install fiber optic cables and CCTVs along the shoulder of Route 73 between PM 26.1 and 28.0. The proposed improvements will require excavation and management of the soil. The purpose of this investigation was to evaluate soil at the Site for the potential presence of hazardous concentrations of lead suspected due to impact from vehicle exhaust emissions when leaded gasoline was used. It is our understanding that Caltrans will use information obtained from the investigation to determine soil reuse and/or disposal options and potential worker health and safety concerns. Our scope of services included collection and laboratory analysis of soil samples, and preparation of this report to document results of the investigation.

SAMPLING AND ANALYTICAL TESTING

On August 15, 2014, Geocon collected 44 soil samples from 11 hand-auger borings advanced at locations chosen by Caltrans. Soil samples were collected from each boring at depths of 0 to 0.5 foot, 1.0 to 1.5 foot, 2.5 to 3.0 feet, and 3.5 to 4.0 feet. The approximate locations of the borings are shown on Figures 2 through 5.

The soil samples were collected by transferring the soil from the bottom end of the hand-auger bucket to laboratory-provided glass sample jars with Teflon-lined lids. Samples jars were labeled with a unique sample identification number, Geocon project number, date and time of collection. The samples were then placed in a portable cooler and transported to a certified laboratory for analyses under chain-of-custody procedures.

Sampling equipment was cleansed prior to each sampling effort using a non-phosphate detergent solution and two distilled/purified water rinses. Decontamination water was discharged to the ground surface away from areas potentially associated with surface water bodies or storm drain inlets. The hand-auger borings were backfilled with cuttings and surface soil from the immediate vicinity of the boring location.

The soil samples were submitted to Advanced Technology Laboratories (ATL), a State-certified laboratory located in Signal Hill, California following chain-of-custody procedures. The four soil samples were analyzed for total lead using U.S. Environmental Protection Agency (EPA) Test Method 6010B.

The borings were located utilizing a Global Positioning System (GPS) receiver. Data was recorded in the field and downloaded in the office using surveying TerraSync™ or similar software, in State Plane 83 coordinates. Boring latitude and longitudes coordinates in decimal degrees are provided in Table 1.

SAMPLE ANALYTICAL RESULTS

Analytical results are summarized below and in Table 1. Copies of laboratory reports and chain-of-custody documentations are attached.

Total lead was reported for the samples at concentrations ranging from 1.5 to 38 milligrams per kilogram (mg/kg).

None of the samples collected from Site exhibited total lead concentrations greater than the Total Threshold Limit Concentration (TTLC) of 1,000 mg/kg, or ten times the Soluble Threshold Limit Concentration (STLC) of 5.0 milligrams per liter (mg/l).

Based on these results further testing of the soil for soluble lead content was not necessary.

CONCLUSION AND RECOMMENDATION

Based upon the reported total lead concentrations, the soil would be classified as non-hazardous with respect to lead content. Accordingly, the soil is suitable for onsite reuse without restriction (Caltrans Type X) with respect to lead content (see attached ADL Soil Management Table).

If the excess soil is to be transported off-site for disposal, it would be characterized as non-hazardous soil with respect to lead content. If the material is to be disposed of off-site, disposal should be done in accordance with the recommendations of SSP 7-1.02K.

Please call if you have any questions or desire additional information.

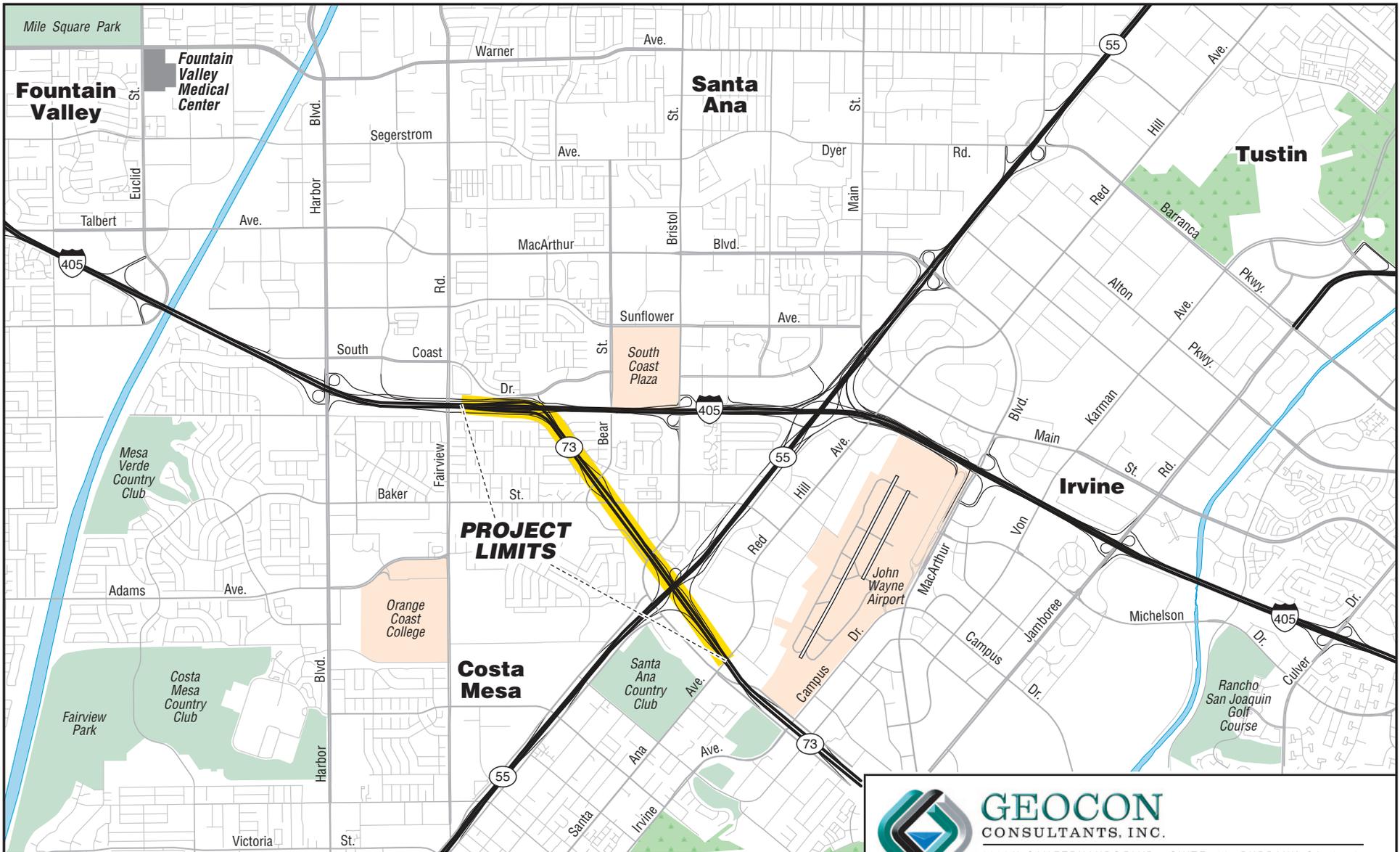
Very truly yours,

GEOCON CONSULTANTS, INC.


Mike Conkle, PG
Senior Geologist



Attachments: Figure 1: Vicinity Map
Figure 2 through Figure 5: Sampling Location Maps
Table 1 – Boring Coordinates and Summary of Analytical Results
Aerially Deposited Lead Soil Management Table
Laboratory Analytical Report and Chain-of-custody Documentation



GEOCON
CONSULTANTS, INC.

3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA. 91504
PHONE 818.841.8388 - FAX 818.841.1704

Route 73 between Route 55 and I-405

Post Mile 26.1 to 28.0
Costa Mesa, California

VICINITY MAP

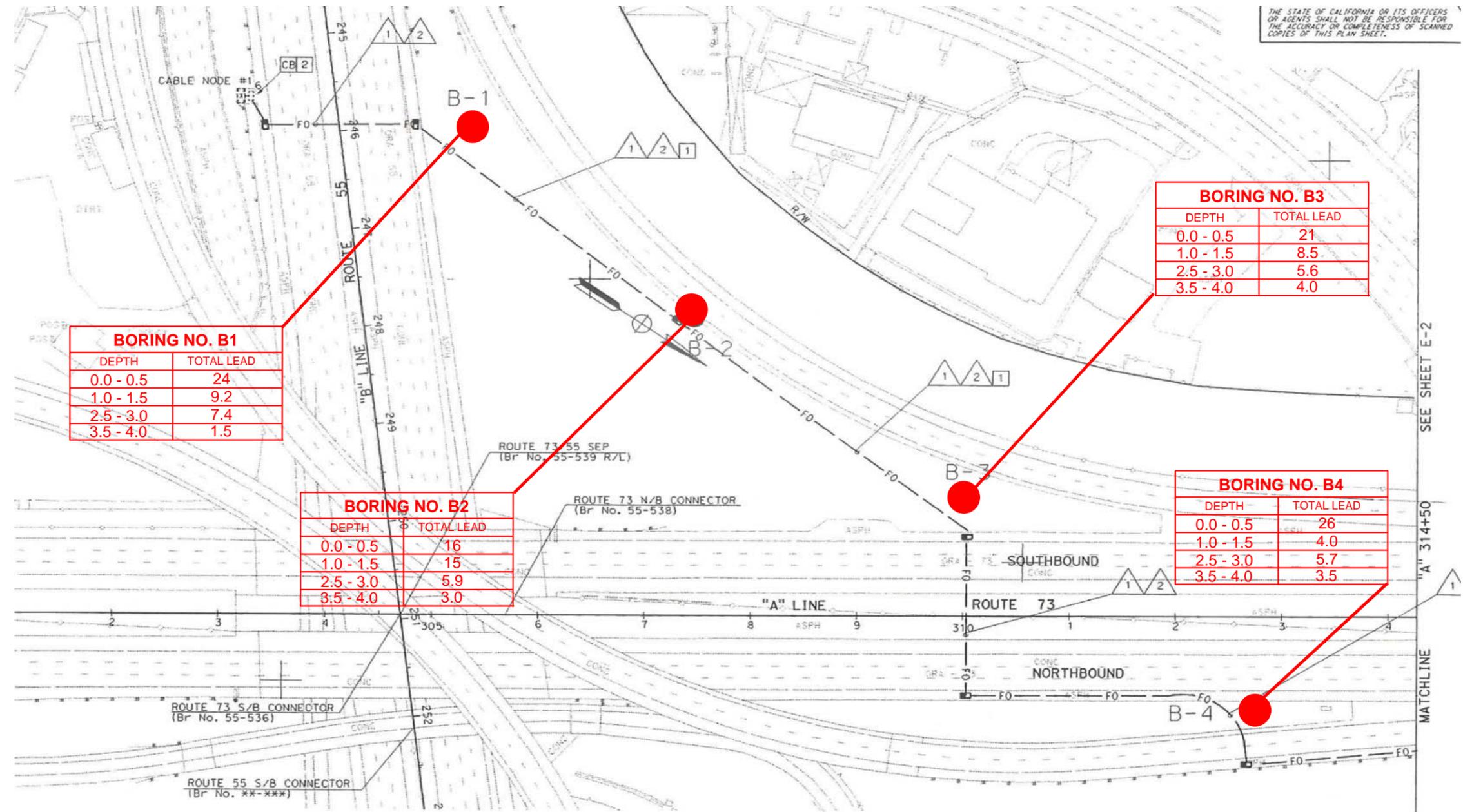
GEOCON Proj. No. S9890-06-01

Task Order No. 12-0H2250-1

September 2014

Figure 1

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PLAN BY: CALTRANS

LEGEND

 Approximate Sample Location

GEOCON
CONSULTANTS, INC.



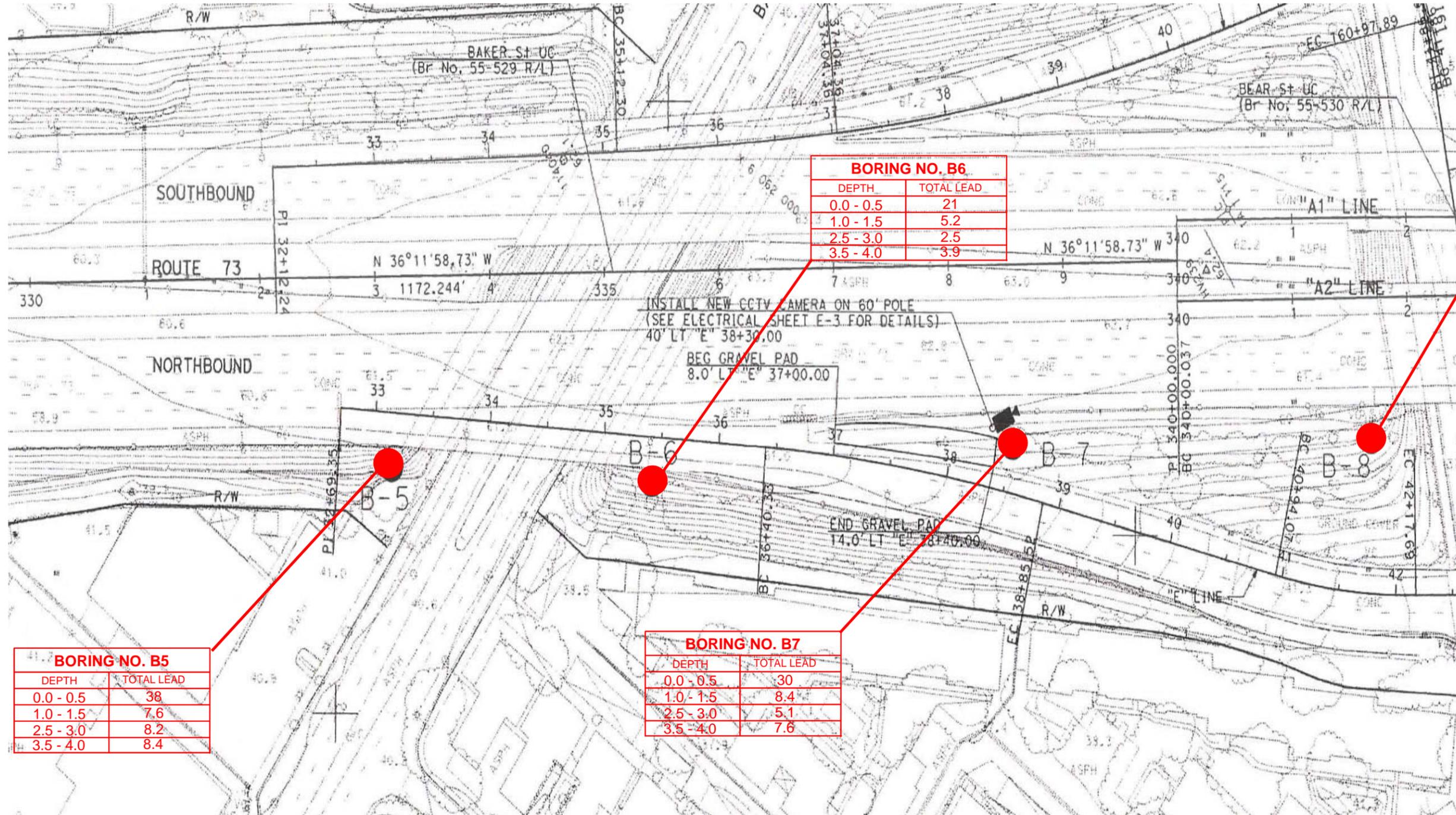
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

MKA	8000
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SAMPLING LOCATION MAP

ROUTE 73 ADL INVESTIGATION
POST MILE 26.1 TO 28.0
COSTA MESA, CALIFORNIA

SEP. 2014	PROJECT NO. S9890-06-01	FIG. 2
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BORING NO. B6	
DEPTH	TOTAL LEAD
0.0 - 0.5	21
1.0 - 1.5	5.2
2.5 - 3.0	2.5
3.5 - 4.0	3.9

BORING NO. B8	
DEPTH	TOTAL LEAD
0.0 - 0.5	38
1.0 - 1.5	18
2.5 - 3.0	8.3
3.5 - 4.0	7.7

BORING NO. B5	
DEPTH	TOTAL LEAD
0.0 - 0.5	38
1.0 - 1.5	7.6
2.5 - 3.0	8.2
3.5 - 4.0	8.4

BORING NO. B7	
DEPTH	TOTAL LEAD
0.0 - 0.5	30
1.0 - 1.5	8.4
2.5 - 3.0	5.1
3.5 - 4.0	7.6

PLAN BY: CALTRANS

LEGEND

 Approximate Sample Location



GEOCON
CONSULTANTS, INC.



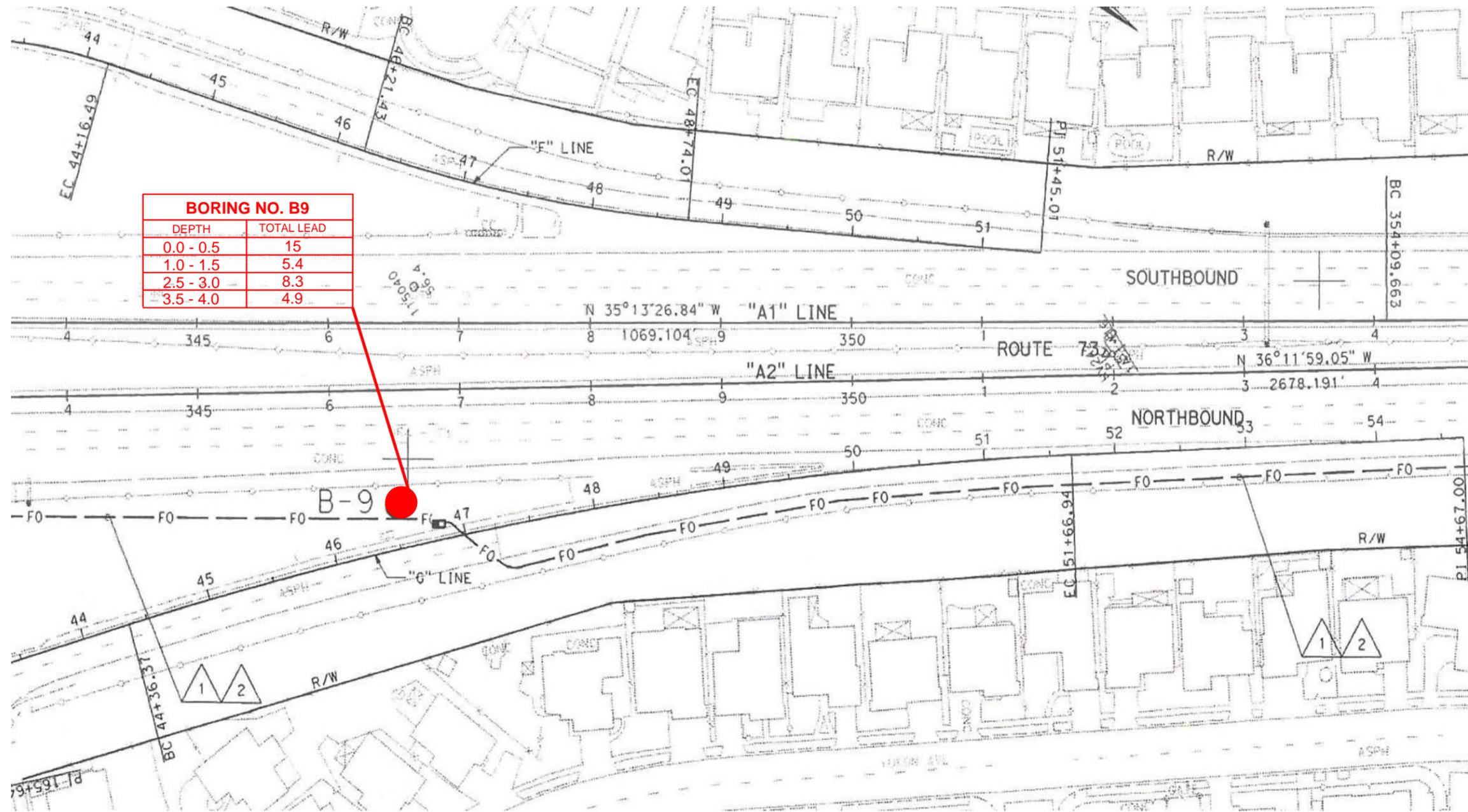
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MKA	8000
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SAMPLING LOCATION MAP

ROUTE 73 ADL INVESTIGATION
POST MILE 26.1 TO 28.0
COSTA MESA, CALIFORNIA

SEP. 2014	PROJECT NO. S9890-06-01	FIG. 3
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PLAN BY: CALTRANS

LEGEND

 Approximate Sample Location

GEOCON
CONSULTANTS, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
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MKA

8000

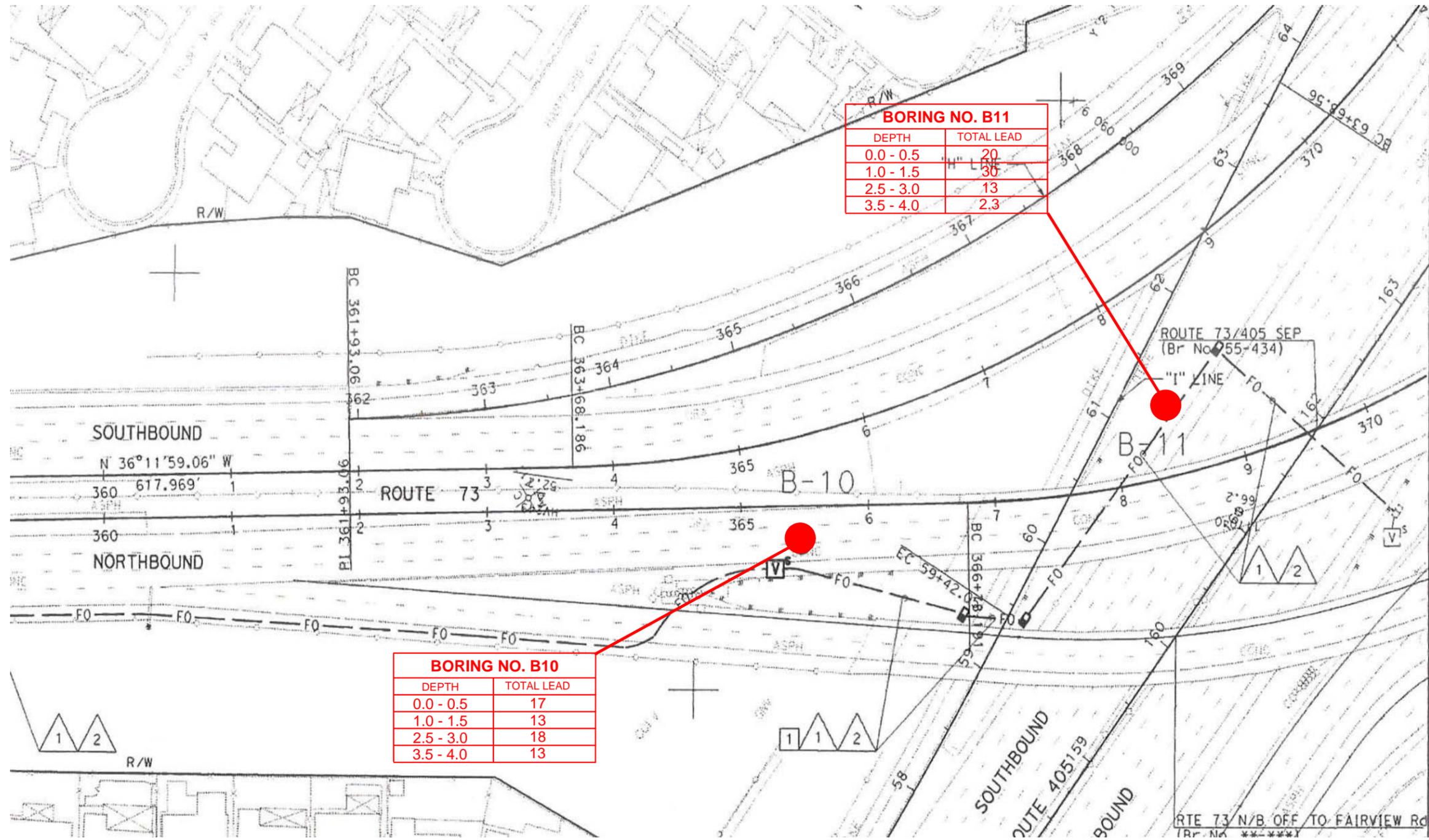
SAMPLING LOCATION MAP

ROUTE 73 ADL INVESTIGATION
POST MILE 26.1 TO 28.0
COSTA MESA, CALIFORNIA

SEP. 2014

PROJECT NO. S9890-06-01

FIG. 4



LEGEND

● Approximate Sample Location

GEOCON
CONSULTANTS, INC.



ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
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MKA

8000

SAMPLING LOCATION MAP

ROUTE 73 ADL INVESTIGATION
POST MILE 26.1 TO 28.0
COSTA MESA, CALIFORNIA

SEP. 2014

PROJECT NO. S9890-06-01

FIG. 5

TABLE 1
 BORING COORDINATES AND SUMMARY OF SOIL ANALYTICAL RESULTS
 CALTRANS CONTRACT 12A15335, 12-OH2250
 NORTHBOUND ROUTE 73
 COSTA MESA, CALIFORNIA

BORING ID	LATITUDE	LONGITUDE	SAMPLE DEPTH (feet)	Total Lead ³ (mg/kg)	WET Lead ⁴ (mg/l)	WET-DI Lead ⁵ (mg/l)	TCLP Lead ⁶ (mg/l)	pH ⁷
B1-0.5	33.67284000	-117.88769650	0.0-0.5	24	--	--	--	--
B1-1.5			1.0-1.5	9.2	--	--	--	--
B1-3.0			2.5-3.0	7.4	--	--	--	--
B1-4.0			3.5-4.0	1.5	--	--	--	--
B2-0.5	33.67363000	-117.88750430	0.0-0.5	16	--	--	--	--
B2-1.5			1.0-1.5	15	--	--	--	--
B2-3.0			2.5-3.0	5.9	--	--	--	--
B2-4.0			3.5-4.0	3.0	--	--	--	--
B3-0.5	33.67470000	-117.88770710	0.0-0.5	21	--	--	--	--
B3-1.5			1.0-1.5	8.5	--	--	--	--
B3-3.0			2.5-3.0	5.6	--	--	--	--
B3-4.0			3.5-4.0	4.0	--	--	--	--
B4-0.5	33.67525000	-117.88742220	0.0-0.5	26	--	--	--	--
B4-1.5			1.0-1.5	4.0	--	--	--	--
B4-3.0			2.5-3.0	5.7	--	--	--	--
B4-4.0			3.5-4.0	5.2	--	--	--	--
B5-0.5	33.67985000	-117.89140250	0.0-0.5	38	--	--	--	--
B5-1.5			1.0-1.5	7.6	--	--	--	--
B5-3.0			2.5-3.0	8.2	--	--	--	--
B5-4.0			3.5-4.0	8.4	--	--	--	--
B6-0.5	33.68036000	-117.89180680	0.0-0.5	21	--	--	--	--
B6-1.5			1.0-1.5	5.2	--	--	--	--
B6-3.0			2.5-3.0	2.5	--	--	--	--
B6-4.0			3.5-4.0	3.9	--	--	--	--
B7-0.5	33.68107000	-117.89250940	0.0-0.5	30	--	--	--	--
B7-1.5			1.0-1.5	8.4	--	--	--	--
B7-3.0			2.5-3.0	5.1	--	--	--	--
B7-4.0			3.5-4.0	7.6	--	--	--	--
B8-0.5	33.68116900	-117.89310600	0.0-0.5	38	--	--	--	--
B8-1.5			1.0-1.5	18	--	--	--	--
B8-3.0			2.5-3.0	8.3	--	--	--	--
B8-4.0			3.5-4.0	7.7	--	--	--	--
B9-0.5	33.68285000	-117.89414640	0.0-0.5	15	--	--	--	--
B9-1.5			1.0-1.5	5.4	--	--	--	--
B9-3.0			2.5-3.0	8.3	--	--	--	--
B9-4.0			3.5-4.0	4.9	--	--	--	--

TABLE 1
 BORING COORDINATES AND SUMMARY OF SOIL ANALYTICAL RESULTS
 CALTRANS CONTRACT 12A15335, 12-OH2250
 NORTHBOUND ROUTE 73
 COSTA MESA, CALIFORNIA

BORING ID	LATITUDE	LONGITUDE	SAMPLE DEPTH (feet)	Total Lead ³ (mg/kg)	WET Lead ⁴ (mg/l)	WET-DI Lead ⁵ (mg/l)	TCLP Lead ⁶ (mg/l)	pH ⁷
B10-0.5	33.68712000	-117.89810270	0.0-0.5	17	--	--	--	--
B10-1.5			1.0-1.5	13	--	--	--	--
B10-3.0			2.5-3.0	18	--	--	--	--
B10-4.0			3.5-4.0	13	--	--	--	--
B11-0.5	33.68717000	-117.89788730	0.0-0.5	20	--	--	--	--
B11-1.5			1.0-1.5	30	--	--	--	--
B11-3.0			2.5-3.0	13	--	--	--	--
B11-4.0			3.5-4.0	2.3	--	--	--	--
Average Values:				12.3	--	--	--	--
Regulatory Limits:				1,411 ⁹	5.0 ¹⁰	1.5 ¹¹	5.0 ¹²	5.0 ¹¹

Notes:

1. Samples analyzed by Advanced Technology Laboratories of Signal Hill, California.
2. Samples were collected using a hand auger; sample depths in feet below ground surface.
3. U.S. Environmental Protection Agency (EPA) Method 6010; concentrations in milligrams per kilogram (mg/kg).
4. Soluble lead using the Waste Extraction Test (WET) with citric acid as the extractant; concentrations in milligrams per liter (mg/l).
5. Soluble lead using the WET with deionized water as the extractant (WET-DI); concentrations in mg/l.
6. Soluble lead analyzed by the Toxicity Characteristic Leaching Procedure (TCLP); concentrations in mg/l.
7. U.S. EPA Method 9045.
8. -- = Not analyzed.
9. Limit specified in addendum to Variance issued by the Department of Toxic Substances Control to Caltrans (DTSC Variance, September 22, 2000; Addendum, June 2014).
10. Soluble Threshold Limit Concentration (STLC) for California hazardous waste (California Code of Regulations [CCR] Title 22, Section 66261.24).
11. Limit Specified in DTSC Variance.
12. Maximum concentration for the Toxicity Characteristic of Resource Conservation Recovery Act (RCRA) hazardous waste (CCR Title 22, Section 66261.24).

AERIALY DEPOSITED LEAD SOIL MANAGEMENT

SOLUBLE LEAD (mg/l)	TOTAL LEAD (mg/kg)	SOIL TYPE	HANDLING
CALIFORNIA TESTING			
STLC <5.0	TTLC <1000	X	Non-hazardous Waste. Notify and require Lead Compliance Plan for worker safety.
	1000 – 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure. *
	1000 – 3397 but Surplus	Z2	Hazardous Waste - Surplus. Dispose at Class 1 disposal site.
	> 3397 or 1000 – 3397 & DI WET > 150 mg/l	Z2	Hazardous Waste – not reusable under Variance. Dispose at Class 1 disposal site.
STLC >5.0	TTLC < 1411 and DI WET < 1.5 mg/l	Y1	Hazardous Waste. Variance applies – cover with minimum of 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	Hazardous Waste. Variance applies – cover with pavement structure.*
	< 3397 and DI WET < 150 mg/l but Surplus	Z2	Hazardous Waste - Surplus. Dispose at Class 1 disposal site.
	> 3397 or DI WET > 150 mg/l	Z2	Hazardous Waste – not reusable under Variance. Dispose at Class 1 disposal site.
FEDERAL TESTING			
TCLP > 5.0 mg/l	N/A	Z3	RCRA Hazardous Waste Dispose at Class 1 disposal site as a RCRA waste regardless of TTLC and STLC results.

*Note: For hazardous waste levels of lead - if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance can not be used and the soil must be disposed as Z-2 material.



August 25, 2014

Mike Conkle
Geocon West, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504
Tel: (818) 841-8388
Fax:(818) 841-1704

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1402391

Client Reference : Northbound Route 73, S9890-06-01

Enclosed are the results for sample(s) received on August 15, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Rodriguez', written over a light gray rectangular background.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Geocon West, Inc.

3303 N. San Fernando Blvd., Suite 100

Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01

Report To : Mike Conkle

Reported : 08/25/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B11-0.5	1402391-01	Soil	8/15/14 9:21	8/15/14 16:55
B11-1.5	1402391-02	Soil	8/15/14 9:24	8/15/14 16:55
B11-3.0	1402391-03	Soil	8/15/14 9:29	8/15/14 16:55
B11-4.0	1402391-04	Soil	8/15/14 9:34	8/15/14 16:55
B10-0.5	1402391-05	Soil	8/15/14 9:18	8/15/14 16:55
B10-1.5	1402391-06	Soil	8/15/14 9:22	8/15/14 16:55
B10-3.0	1402391-07	Soil	8/15/14 9:26	8/15/14 16:55
B10-4.0	1402391-08	Soil	8/15/14 9:29	8/15/14 16:55
B7-0.5	1402391-09	Soil	8/15/14 10:11	8/15/14 16:55
B7-1.5	1402391-10	Soil	8/15/14 10:14	8/15/14 16:55
B7-3.0	1402391-11	Soil	8/15/14 10:19	8/15/14 16:55
B7-4.0	1402391-12	Soil	8/15/14 10:23	8/15/14 16:55
B8-0.5	1402391-13	Soil	8/15/14 10:16	8/15/14 16:55
B8-1.5	1402391-14	Soil	8/15/14 10:20	8/15/14 16:55
B8-3.0	1402391-15	Soil	8/15/14 10:25	8/15/14 16:55
B8-4.0	1402391-16	Soil	8/15/14 10:29	8/15/14 16:55
B5-0.5	1402391-17	Soil	8/15/14 10:53	8/15/14 16:55
B5-1.5	1402391-18	Soil	8/15/14 10:57	8/15/14 16:55
B5-3.0	1402391-19	Soil	8/15/14 11:01	8/15/14 16:55
B5-4.0	1402391-20	Soil	8/15/14 11:05	8/15/14 16:55
B6-0.5	1402391-21	Soil	8/15/14 11:17	8/15/14 16:55
B6-1.5	1402391-22	Soil	8/15/14 11:20	8/15/14 16:55
B6-3.0	1402391-23	Soil	8/15/14 11:24	8/15/14 16:55
B6-4.0	1402391-24	Soil	8/15/14 11:29	8/15/14 16:55
B9-0.5	1402391-25	Soil	8/15/14 11:47	8/15/14 16:55
B9-1.5	1402391-26	Soil	8/15/14 12:02	8/15/14 16:55
B9-3.0	1402391-27	Soil	8/15/14 12:04	8/15/14 16:55
B9-4.0	1402391-28	Soil	8/15/14 12:08	8/15/14 16:55
B1-0.5	1402391-29	Soil	8/15/14 12:46	8/15/14 16:55
B1-1.5	1402391-30	Soil	8/15/14 12:49	8/15/14 16:55
B1-3.0	1402391-31	Soil	8/15/14 12:55	8/15/14 16:55
B1-4.0	1402391-32	Soil	8/15/14 12:58	8/15/14 16:55
B2-0.5	1402391-33	Soil	8/15/14 12:32	8/15/14 16:55
B2-1.5	1402391-34	Soil	8/15/14 12:43	8/15/14 16:55



Certificate of Analysis

Geocon West, Inc.

3303 N. San Fernando Blvd., Suite 100

Burbank , CA 91504

Project Number : Northbound Route 73, S9890-06-01

Report To : Mike Conkle

Reported : 08/25/2014

B2-3.0	1402391-35	Soil	8/15/14 12:47	8/15/14 16:55
B2-4.0	1402391-36	Soil	8/15/14 12:49	8/15/14 16:55
B3-0.5	1402391-37	Soil	8/15/14 12:26	8/15/14 16:55
B3-1.5	1402391-38	Soil	8/15/14 12:29	8/15/14 16:55
B3-3.0	1402391-39	Soil	8/15/14 12:34	8/15/14 16:55
B3-4.0	1402391-40	Soil	8/15/14 12:38	8/15/14 16:55
B4-0.5	1402391-41	Soil	8/15/14 13:21	8/15/14 16:55
B4-1.5	1402391-42	Soil	8/15/14 13:23	8/15/14 16:55
B4-3.0	1402391-43	Soil	8/15/14 13:27	8/15/14 16:55
B4-4.0	1402391-44	Soil	8/15/14 13:30	8/15/14 16:55

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



Certificate of Analysis

Geocon West, Inc.

3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01

Report To : Mike Conkle

Reported : 08/25/2014

Lead by ICP-AES EPA 6010B

Analyte: Lead

Analyst: SB

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time	
									Analyzed	Notes
1402391-01	B11-0.5	20	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 10:55	
1402391-02	B11-1.5	30	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 10:56	
1402391-03	B11-3.0	13	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 10:57	
1402391-04	B11-4.0	2.3	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:01	
1402391-05	B10-0.5	17	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:02	
1402391-06	B10-1.5	13	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:02	
1402391-07	B10-3.0	18	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:05	
1402391-08	B10-4.0	13	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:06	
1402391-09	B7-0.5	30	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:07	
1402391-10	B7-1.5	8.4	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:07	
1402391-11	B7-3.0	5.1	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:09	
1402391-12	B7-4.0	7.6	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:12	
1402391-13	B8-0.5	38	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:13	
1402391-14	B8-1.5	18	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:13	
1402391-15	B8-3.0	8.3	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:14	
1402391-16	B8-4.0	7.7	mg/kg	1.0	0.14	1	B4H0303	08/21/2014	08/22/14 11:15	
1402391-17	B5-0.5	38	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:24	
1402391-18	B5-1.5	7.6	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:25	
1402391-19	B5-3.0	8.2	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:26	
1402391-20	B5-4.0	8.4	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:26	
1402391-21	B6-0.5	21	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:27	
1402391-22	B6-1.5	5.2	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:28	
1402391-23	B6-3.0	2.5	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:29	
1402391-24	B6-4.0	3.9	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:30	
1402391-25	B9-0.5	15	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:31	
1402391-26	B9-1.5	5.4	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:34	
1402391-27	B9-3.0	8.3	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:37	
1402391-28	B9-4.0	4.9	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:38	
1402391-29	B1-0.5	24	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:39	
1402391-30	B1-1.5	9.2	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:39	



Certificate of Analysis

Geocon West, Inc.

3303 N. San Fernando Blvd., Suite 100

Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01

Report To : Mike Conkle

Reported : 08/25/2014

Lead by ICP-AES EPA 6010B

Analyte: Lead

Analyst: SB

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time	Notes
									Analyzed	
1402391-31	B1-3.0	7.4	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:40	
1402391-32	B1-4.0	1.5	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:41	
1402391-33	B2-0.5	16	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:42	
1402391-34	B2-1.5	15	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:45	
1402391-35	B2-3.0	5.9	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:46	
1402391-36	B2-4.0	3.0	mg/kg	1.0	0.14	1	B4H0304	08/21/2014	08/22/14 11:47	
1402391-37	B3-0.5	21	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:52	
1402391-38	B3-1.5	8.5	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:53	
1402391-39	B3-3.0	5.6	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:56	
1402391-40	B3-4.0	4.0	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:57	
1402391-41	B4-0.5	26	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:58	
1402391-42	B4-1.5	4.0	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:58	
1402391-43	B4-3.0	5.7	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 11:59	
1402391-44	B4-4.0	5.2	mg/kg	1.0	0.14	1	B4H0305	08/21/2014	08/22/14 12:00	



Certificate of Analysis

Geocon West, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01
Report To : Mike Conkle
Reported : 08/25/2014

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4H0303 - EPA 3050 Modified									
Blank (B4H0303-BLK1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	0.396305	1.0			NR				J
Blank (B4H0303-BLK2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	0.251823	1.0			NR				J
LCS (B4H0303-BS1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	52.0138	1.0	50.0000		104	80 - 120			
Duplicate (B4H0303-DUP1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	6.97850	1.0		7.66569	NR		9.39	20	
Duplicate (B4H0303-DUP2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	8.66882	1.0		13.2739	NR		42.0	20	R
Matrix Spike (B4H0303-MS1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	223.244	1.0	250.000	7.66569	86.2	33 - 134			
Matrix Spike (B4H0303-MS2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	267.465	0.99	247.525	13.2739	103	33 - 134			
Matrix Spike Dup (B4H0303-MSD1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	229.756	1.0	250.000	7.66569	88.8	33 - 134	2.88	20	
Batch B4H0304 - EPA 3050 Modified									
Blank (B4H0304-BLK1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	0.328559	1.0			NR				J
Blank (B4H0304-BLK2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	0.412851	1.0			NR				J
LCS (B4H0304-BS1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	53.0327	1.0	50.0000		106	80 - 120			
Duplicate (B4H0304-DUP1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	2.92111	1.0		2.98859	NR		2.28	20	
Duplicate (B4H0304-DUP2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	4.34276	1.0		5.37957	NR		21.3	20	R
Matrix Spike (B4H0304-MS1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	234.307	1.0	250.000	2.98859	92.5	33 - 134			
Matrix Spike (B4H0304-MS2)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	239.297	1.0	250.000	5.37957	93.6	33 - 134			



Certificate of Analysis

Geocon West, Inc.
 3303 N. San Fernando Blvd., Suite 100
 Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01
 Report To : Mike Conkle
 Reported : 08/25/2014

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4H0304 - EPA 3050 Modified (continued)									
Matrix Spike Dup (B4H0304-MSD1)		Source: 1402391-36			Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	241.334	1.0	250.000	2.98859	95.3	33 - 134	2.95	20	
Batch B4H0305 - EPA 3050 Modified									
Blank (B4H0305-BLK1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	ND	1.0					NR		
LCS (B4H0305-BS1)					Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	54.2413	1.0	50.0000		108	80 - 120			
Duplicate (B4H0305-DUP1)		Source: 1402391-44			Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	4.44696	1.0		5.18476	NR		15.3	20	
Matrix Spike (B4H0305-MS1)		Source: 1402391-44			Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	237.408	1.0	250.000	5.18476	92.9	33 - 134			
Matrix Spike Dup (B4H0305-MSD1)		Source: 1402391-44			Prepared: 8/21/2014 Analyzed: 8/22/2014				
Lead	237.437	1.0	250.000	5.18476	92.9	33 - 134	0.0122	20	



Certificate of Analysis

Geocon West, Inc.

3303 N. San Fernando Blvd., Suite 100

Burbank, CA 91504

Project Number : Northbound Route 73, S9890-06-01

Report To : Mike Conkle

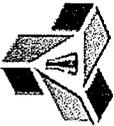
Reported : 08/25/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

- Notes:
- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
 - (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
 - (3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD



Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

Method of Transport
 1. CHILLED
 2. HEADSPACE (VOA)
 3. CONTAINER INTACT
 4. SEALED
 5. # OF SPLS MATCH COC
 6. PRESERVED

Sample Condition Upon Receipt
 Y
 N
 Y
 N
 Y
 N

P.O. #: _____
 Logged By: _____ Date: _____

Client: Geocon
 Attention: Mike Conkle
 Project Name: Northbound Route 73
 Project #: IS890-06-01
 Address: 3303 North San Fernando Blvd Suite 100
 City: Burbank State: CA Zip: 91504
 Tel: 818-841-8388 Fax: 818-841-1704

Relinquished by: (Signature and Printed Name)
Mike Conkle Date: 8/15/14
 Relinquished by: (Signature and Printed Name)
Edward Rodriguez Date: 8/15/14
 Relinquished by: (Signature and Printed Name)
Edward Rodriguez Date: 8/15/14

Received by: (Signature and Printed Name)
Mike Conkle Date: 8/15/14
 Received by: (Signature and Printed Name)
Edward Rodriguez Date: 8/15/14
 Received by: (Signature and Printed Name)
Edward Rodriguez Date: 8/15/14

Send Report To:
 Altn: Mike Conkle
 Co: Geocon Consultants Inc.
 Addr: 3303 North San Fernando Blvd, Suite 100
 City: Burbank State: CA Zip: 91504

Special Instructions/Comments:
 CT Contract 12A1535
 Run samples with total lead greater than or equal to 50 mg/kg by WET. Run samples with WET results greater than or equal to 5.0 mg/l by DI-WET. Report MDL & PQL limits.
Samples of 100 lbs.

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter:
Mike Conkle Date: 8/15/14
 Print Name: *Mike Conkle* Signature: *Mike Conkle*

Storage Fees (applies when storage is requested):
 Sample: \$2.00 / sample / mo (after 45 days)
 Records: \$1 / ATL workorder / mo (after 1 year)

LAB USE ONLY:	Lab No.	Sample ID / Location	Date	Time	Sample Description	SPECIFY APPROPRIATE MATRIX		QA/QC	REMARKS
						WATER	SOIL		
	1402391-41	B-4-0.5	8/15/14	1330	WASTEWATER	X			
		B-4-1.5	8/15/14	1330	GROUND WATER	X			
		B-4-3.0	8/15/14	1330	SOIL	X			
		B-4-4.0	8/15/14	1330	SOIL	X			

TAT starts 8AM the following day if samples received after 3 PM

TAT: A = Overnight ≤ 24 hrs
 B = Emergency Next Workday
 C = Critical - 2 Workdays
 D = Urgent 3 Workdays
 E = Routine 7 Workdays

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(Ac)₂ O=NaOH T=Na₂S₂O₃

Preservatives:
 G=Glass P=Plastic M=Metal